

Patent claims:

1. A cylinder lock, especially for motor vehicles, comprising a housing in the inner cylindrical cavity of which there is arranged a cylinder core that is equipped with a key channel and spring-loaded tumblers, wherein, when no appropriate key is fully inserted into the key channel, blocking projections of the tumblers protrude into a blocking groove formed in a member in which the cylindrical core is supported for turning and, when the appropriate key is fully inserted, the blocking projections of the tumblers do not extend beyond the periphery of the cylindrical core, wherein the cylinder lock is further provided with means for coupling the cylindrical core with an output member of the cylinder lock when the cylindrical core is being turned by the appropriate key, and for uncoupling of the cylindrical core from the output member of the cylinder lock when the cylinder core is turned by means of an inappropriate key or forcibly by a foreign body, characterized in that the cylindrical inner cavity of the housing (1) is provided with through-turnable annular grooves (11), and that at least one rib (12) which delimits the adjacent through-turnable groove (11) at that axial side that lies opposite to the direction (o) of a disengagement axial displacement of the cylindrical core (2) from the output member (3) is interrupted by at least one blocking groove (13), while blocking groove lateral surfaces (130, 131) diverge in the direction (o) of the disengagement axial displacement of the cylinder core (2) from the output member (3).
2. Cylinder lock according to claim 1, characterized in that the housing (1) is composed of two housing halves (1', 1'') that are rigidly connected with one another.
3. Cylinder lock according to claim 1 or 2, characterized in that the inner cylindrical cavity of the housing (1) is provided with at least one support ring groove (151, 152) in which there is received an outer collar (251, 252) of the cylindrical core (2) with an axial leeway (a), wherein the axial leeway (a) at least corresponds to a distance (b) of the axial displacement that is necessary for the disengagement of the coupling (30).
4. Cylinder lock according to claim 1 or 2, characterized in that the blocking grooves (13) for a pair of tumblers (20, 20') are arranged in the housing (1) at 180° with respect on one another.

5. Cylinder lock according to claim 1 or 2, characterized in that the blocking groove lateral surfaces (130, 131) are constituted by planar facets which enclose the same acute angle (β) with a symmetry plane of the blocking groove (13).
6. Cylinder lock according to at least one preceding claim, characterized in that an axial extension (23) of the cylindrical core (2) is provided with a first axial abutment (25) which unequivocally determines the position of first coupling elements (301) of the entraining member (31) when in engagement with second coupling elements (231) of the axial extension (23) of the cylinder core (2), and the cylinder core (2) is provided with a second axial abutment (26) which unequivocally determines the position of the first coupling elements (301) of the entraining member (31) when out of engagement with the second coupling elements (231) of the axial extension (23).
7. Cylinder lock according to claim 6, characterized in that the second coupling elements (231) are constituted by a first radial recess (271) and by an oppositely located second radial recess (272) which are formed in an annular collar (27) provided on the axial extension (23), wherein there is formed between the annular collar (27) and an inner offset surface (24) of the cylinder core (2) an annular groove (28) a first annular lateral surface (281) of which that faces toward the inner offset surface (24) constitutes the second axial abutment (26), wherein the first coupling elements (301) are constituted by inner radial projections (301') of the entraining member (31).
8. Cylinder lock according to claim 7, characterized in that a diameter (D2) of the axial extension (23) at least behind the annular collar (23) is greater than a diameter (D1) of a bottom of the annular groove (28), that concave end faces (313) of the radial projections (301') of the entraining member (31) contact the bottom of the annular groove (28), wherein the first radial recess (271) is recessed into the axial extension (23) at least to the bottom of the annular groove (28) and its second annular groove lateral surface (282) that faces toward the output member (3) constitutes the first axial abutment (25), while the second radial recess (272) is recessed into the axial extension (23) below the bottom of the annular groove (28) and is terminated from one side at the first annular groove lateral surface (281), while it merges in the opposite direction into a second slip-on groove (233) the bottom of which is spaced from an oppositely situated surface of the

axial extension (23) at the maximum by a distance (L) which is equal to the diameter (D1) of the bottom of the annular groove (28).

9. Cylinder lock according the claim 7, characterized in that the diameter (D2) of the axial extension (23) behind the annular collar (27) is equal to or smaller than the diameter (D1) of the annular groove 28 and the first axial abutment (25) is constituted by an end face of a securing disk or of a stop member or a nut which is arranged on the axial extension (23) behind the annular collar without any leeway.
10. Cylinder lock according to claim 7, characterized in that a return spring (4) is accommodated in a blind bore (232) of the axial extension (23).